

PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in the Construction of Walls for Buildings.

We, **RUDOLF HÖBLER**, an Austrian subject, of Schillerstrasse, No. 34, Mödling, Austria, and **SIGMUND RENZI**, an Austrian subject, of Tuchlauben 12, Vienna I, Austria, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 For the erection of buildings various plate constructions for walls have already been proposed, amongst others plate-walls, in which the plates, provided with edge-grooves are arranged in relation to one another in such a manner that the edge grooves form continuous channels into which a frame work of rigid building material may be inserted. In spite of all efforts it has been hitherto impossible to produce a light weighted and at the same time heat insulating and sound proof wall, suitable for the manufacture in a simple and cheap manner, of solid and hollow walls capable of carrying loads and of good durability.

25 According to the present invention these disadvantages are overcome by making the building elements, consisting of plates grooved in known manner, of paper, paste-board, reed or the like and the frame work of a substance such as cement, mortar, reinforced concrete, gypsum or the like.

30 It has been found that the use of these materials although considered exceptional and surprising by those skilled in the art renders possible the manufacture of exceedingly durable buildings as regards carrying loads, and trials have proved, that such building plates of paper, paste-board and the like may be very advantageously combined with any of the cementitious substances used in the build-

ing art, especially when the building plates are prepared from raw materials impregnated with asphaltum, pitch or the like.

In the drawing a form of embodiment of the invention illustrating a wall construction for a dwelling house, is shown. Figs. 1 and 2 show a longitudinal section, and front elevation partly in section of the wall, respectively. Fig. 3 shows a horizontal section on line III—III of Fig. 2. Figs. 4 and 5 are perspective views of the building elements required for making the walls, whilst the Figs. 6—10 show details of the wall in horizontal section.

The plate wall consists in known manner of a series of building plates α , joined one to the other and being shaped as shown diagrammatically in Fig. 4. According to the invention the building plates are made of cellulose-like materials, such, for example, as paper, paste-board, reed or the like and consist of a solid or hollow core 1 of paper, paste-board or reed and two plates 2, 2, also made of paper, paste-board or reed and projecting beyond the edges of the core. Along the edge of the building plate is thus formed the edge-groove 3 similar to that formed in known types of building plates into which the frame work α consisting of rigid building material is inserted.

The building plates α are joined one with another in such a manner that the edges of their plates 2 rest upon and against those of the plates immediately beneath and on either side respectively, the hollow spaces formed by the grooves being filled with binding means, such as, for instance cement, mortar or concrete, lime, gypsum or the like. The wall thus formed consists of a frame work composed

of vertical and horizontal webs z of a rigid building material, into which the building plates x are firmly assembled.

By reinforcing the vertical and horizontal frame webs with iron or sheet metal insertions z^1 of known construction the said wall construction may be employed in the erection of buildings capable of carrying loads and is especially applicable to small dwelling-houses which are required to be quickly erected.

In order to comply with the static requirements of the building the webs z of the frame work may be broadened to any desired extent independently of the depth of the grooves of the building plates and in this case it is only necessary to insert filling pieces 5 between the edges of the elements 2 of the building plates as may be seen from Fig. 7.

Similarly all angular or round wall corner joints required for building purposes may be easily manufactured. For this purpose the building plates x meeting each other at an angle are in a known manner provided with suitable corner pieces $10, 11$ (Fig. 8 to 10) which are held together by any suitable means, for instance, screw bolts 12 . If thereafter the hollow-space, left between the corner pieces $10, 11$ and the grooves of the building plates, is filled up an absolutely safe and durable corner joint is attained. The corner joint according to Fig. 9 differs from that shown in Fig. 8 only by the provision of a packing-piece 13 , which is inserted between the edges of the building plates 2 . In the corner joint shown in Fig. 10 the corner piece 10 is embodied in such a manner that it lies flush with the surfaces of the plates $2, 2$.

The wall plaster 15 (Fig. 1) may be laid directly upon the surface of the building

plates, which is advantageous especially when using building plates x possessing plates 2 of corrugated paper. If necessary wire gauze or reed matting 16 (Fig. 6), as in known wall constructions may be employed for attaching the wall plaster. In this case it is advantageous to insert into the frame webs z of the wall, splints 17 of any suitable construction, to which the wire gauze or reed matting 16 , laid over the wall surface, is attached.

With the wall system above described absolutely weather proof buildings may be erected formed of building plates manufactured of paper, paste-board or the like and this may be done in a shorter time and at a lower cost than when other known masonry substitutes are employed.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Plate wall with frame work inserted into the edge grooves of the building plates, characterised by the fact that the building plates consist of paper, paste-board, reed or the like and the frame work of substances such, for instance as cement, mortar reinforced concrete, gypsum and the like.

2. Plate wall according to Claim 1, characterised by the fact that in the webs (z) of the frame work splints (17) are provided, to which material 16 for receiving the wall plaster, is attached.

Dated this 10th day of January, 1921.

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[This Drawing is a reproduction of the Original on a reduced scale]

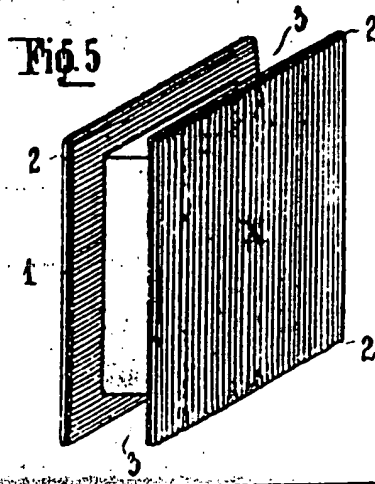
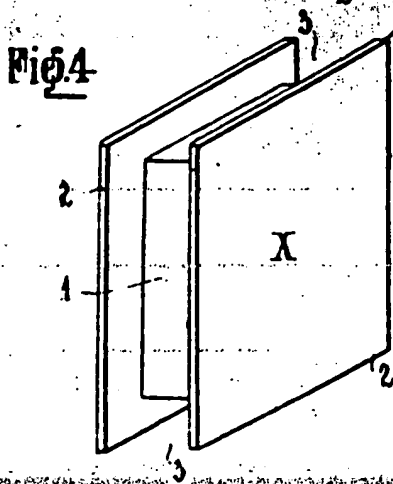
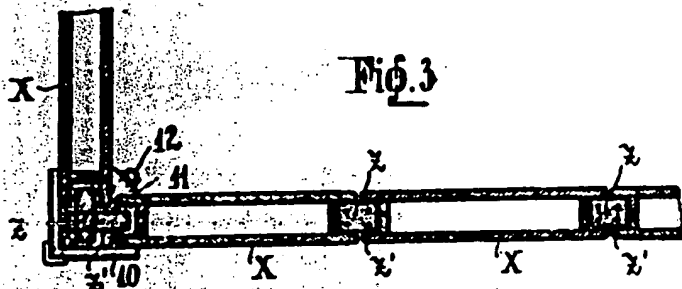
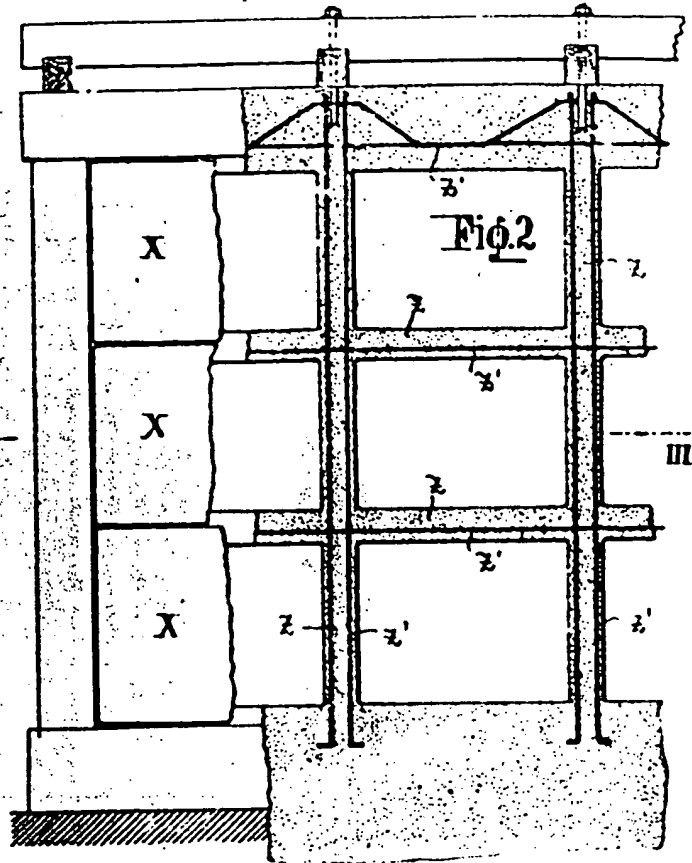
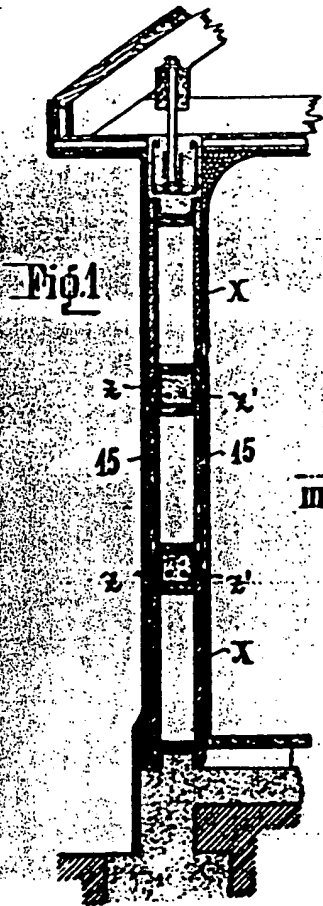


Fig. 6

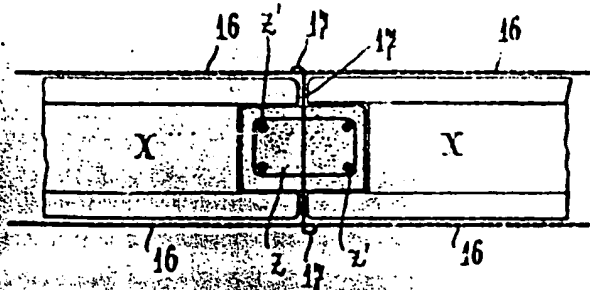


Fig. 7

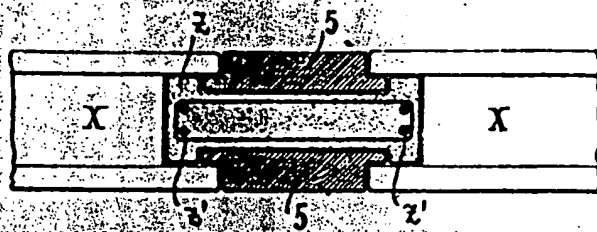


Fig. 8

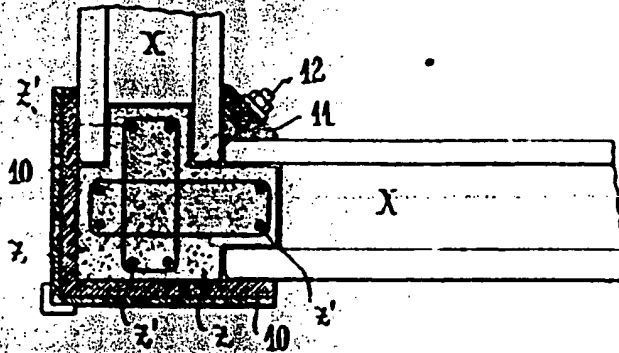


Fig. 9

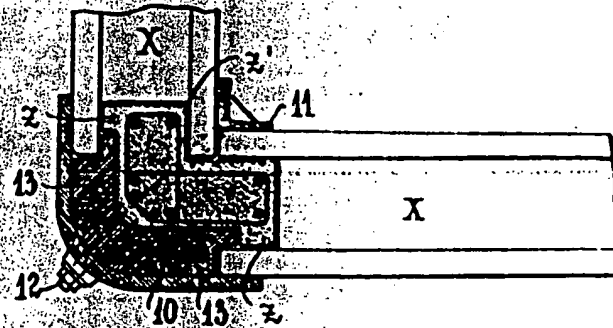
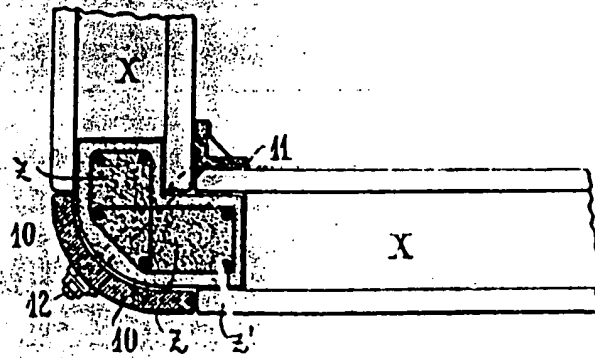


Fig. 10



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